

Application No. 10/696,788
Amendment Dated 1/11/2007
Reply to Office Action of 10/11/2006

BEST AVAILABLE COPYRemarks/Arguments

Claims 21-40 are pending in the application. Claim 21 is currently amended. Claims 31-40 were withdrawn from consideration as being drawn to a non-elected invention.

Claims 21-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Keller (U.S. Pat. No. 6,463,374) in view of Staub (U.S. Pat. No. 6,236,916). This rejection is respectfully traversed for the following reasons.

Keller discloses a guidance system that compensates for a decrease in the spraying width, where a vehicle is operating on terrain sloped transversely with respect to the vehicle. (Col. 9, lines 55-67 and Col. 10, lines 1-4.) Although Keller briefly mentions using multiple Global Positioning System (GPS) antennas to determine "longitudinal slope or pitch," (Col. 10, lines 32-38) nothing in Keller describes using a maximum slope or an aspect angle for guidance of a vehicle.

In FIG. 4 of Staub, "one side of the agricultural machine is 102 is raised, while the other side is not, thus resulting in a roll by angle θ ." (Col. 4, lines 34-37.) Staub illustratively references a "roll of 10 degrees" to emphasize a corresponding significant "lateral error" of approximately 52 centimeters in the location of the vehicle would result. (Col. 4, lines 46-48.) Although Staub references "roll of significant magnitude" (Col. 4, lines 44-59), the quoted term does not refer to a "maximum slope" of the ground, but rather a material roll angle that leads to a significant error in lateral position of the vehicle.

Even if Keller and Staub could be combined, the alleged combination would not meet claim 21. In contrast to the alleged combination of Keller and Staub, claim 21 now recites that "the aspect" is "defined as an angle between the direction of travel of the vehicle and the direction of maximum slope" of the ground. Neither Keller, nor Staub, alone or in combination, teaches or suggests that the "aspect" is "defined as an angle between the direction of travel of the vehicle and the direction of maximum slope" of the ground.

Keller generally compensates for reduced spraying swath width associated with lateral slope (e.g., roll) of the terrain with respect to the vehicle. (Col. 9, lines 55-67 and Col. 10, lines 1-4.) Although Keller tersely mentions considering longitudinal slope for compensation for spraying on undulating terrain (Col. 10, lines 41-47), nothing in Keller teaches or suggests guidance of the vehicle based on an aspect "defined as an angle between the direction of travel of the vehicle and the direction of maximum slope" of the ground. Staub does not make up for the previously noted deficiency of Keller because Staub does not disclose the "aspect," but merely discloses determination of a "lateral error" associated with material roll angle as previously explained above. (See, e.g., Col. 5, lines 52-64.) Accordingly, the alleged combination might arguably compensate for reduced spraying width associated with the material lateral slope of Staub. Additional modifications

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not taught or suggested in the cited references would be needed to meet claim 21.

Applicant notes that the Examiner references the line equation: $y = mx + b$, where m is the slope and where b is the y intercept at x equals 0. The above line equation only characterizes slope in a two dimensions with respect to the x and y axes, as opposed to three dimensions that consider both lateral slope and longitudinal slope. Moreover, the foregoing line equation does not mention an aspect angle as claimed in claim 21.

For the foregoing reasons, Applicants respectfully request a withdrawal of the rejection of claim 21. Because claims 22-30 depend upon claim 21, claims 22-30 are patentable for at least similar reasons to claim 21.

In conclusion, it is believed that this application is in condition for allowance, and such allowance is respectfully requested.

Any fees or charges due as a result of filing of the present paper may be charged against Deposit Account 04-0525.

Respectfully,




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